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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,284

09/10/2003

Kaustubh Das

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EXAMINER

CHO, HONG SOL

ART UNIT

PAPER NUMBER

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/660,284	DAS ET AL.	
	Examiner	Art Unit	
	Hong Cho	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: “a fastpath processor...in the binding cache” in claim 1 lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5, 7-10 and 12-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Forslow (US 6973057).

Re claim 1, Forslow discloses routing mobile IP packet. Forslow discloses a control plane processor (*control engine*, figure 5, element 60); a forwarding plane

processor (*forwarding engine*, figure 5, element 62) coupled to the control plane processor and a fastpath processor (*packet routing*, figure 5, element 74) looking up entries in a binding cache (*MPLS forwarding table*, figure 5, element 76) maintained in the forwarding plane processor to determine whether an entry is specified in the binding cache for the mobile IP packet and forwarding the mobile IP packet from the forwarding element to a destination (*foreign agent*, figure 2, element 20) corresponding to the entry (figure 6a) in the binding cache (column 9, lines 10-13),

Re claim 2, 10, 14, 20, 22 and 28, Forslow discloses encapsulating the mobile IP packet prior to being forwarded to the destination (figure 2, element 38).

Re claim 3, Forslow discloses forwarding plane processor and the fastpath processor comprise a single processor (figure 5, element 62).

Re claims 5, 15 and 23, Forslow discloses routing the mobile IP packet from the network device forwarding plane to a network device control plane (*control engine*, figure 5, element 60) (column 6, lines 1-4).

Re claims 16 and 24, Forslow discloses a control engine with a mobile IP control entity verifying the mobile IP packet (column 12, lines 33-34; column 16, lines 49-51).

Re claims 7, 17 and 25, Forslow discloses the network device control plane causing a binding entry corresponding to the mobile IP packet to be entered into the binding cache (column 12, lines 19-25).

Re claims 8, 18 and 26, Forslow discloses encapsulating the mobile IP packet when it arrives at the network device forwarding plane (figure 2, element 38) and the

destination is a destination of an inner portion of the mobile IP packet (figure 2, element 32).

Re claims 9, 19 and 27, Forslow discloses decapsulating the mobile IP packet in the network device forwarding plane and forwarded from the forwarding element to the destination (column 19, lines 14-16).

Re claim 12, Forslow discloses a forward engine monitoring an interface between the forwarding plane processor and the control plane processor (column 12, lines 12-15).

Re claims 13 and 21, Forslow discloses receiving the mobile IP packet (figure 2, element 32) within a forwarding element (*packet routing*, figure 5, element 74) in a network device forwarding plane (*forwarding engine*, figure 5, element 62) (column 8, line 63 to column 9, line 3), looking up entries in a binding cache (*MPLS forwarding table*, figure 5, element 76) maintained in the forwarding element to determine whether an entry is specified in the binding cache for the mobile IP packet and forwarding the mobile IP packet from the forwarding element to a destination (*foreign agent*, figure 2, element 20) corresponding to the entry (figure 6a) in the binding cache (column 9, lines 10-13).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forslow in view of Subramanian et al (US 6970943), hereinafter referred to as Subramanian.

Re claim 4, Forslow discloses all of the limitations of the base claim, but fails to disclose the fastpath processor routing the mobile IP packet to the forwarding plane processor if the entry for the mobile IP packet does not exist in the binding cache. Subramanian discloses a compute plane sending a packet to a forward plane (column 3, lines 58-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the home agent of Forslow to implement the feature of sending the packet to the forwarding plane so that the packet route not listed in a forwarding table would be routed to default route.

Re claim 6, Forslow discloses a control engine with a mobile IP control entity verifying the mobile IP packet (column 12, lines 33-34; column 16, lines 49-51).

Re claim 11, Forslow discloses a control engine performing security functions (column 12, lines 26-31).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

Art Unit: 2616

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho
Patent Examiner
4/13/07

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